From glowbugs@theporch.com Fri Jan 12 06:56:52 1996
Return-Path: glowbugs@theporch.com
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com
(8.7.3/AUX-3.1.1) with SMTP id GAA03102; Fri, 12 Jan 1996 06:52:46 -0600 (CST)
Date: Fri, 12 Jan 1996 06:52:46 -0600 (CST)
Message-Id: <199601121252.GAA03102@uro.theporch.com>
Errors-To: ws4s@midtenn.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 74
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Status: O

GLOWBUGS Digest 74

Topics covered in this issue include:

Date: Thu, 11 Jan 1996 23:58:42 -0500 (EST)
From: Bruce Robertson <brucerob@epas.utoronto.ca>
To: glowbugs <glowbugs@theporch.com>
Subject: Voltage dropping for filament
Message-ID: <Pine.SGI.3.91.960111234904.5322A-100000@epas.utoronto.ca>

A while back I got the crazy idea of building a 5w xmitter based on the
design of Fred Sutter in a 30's QST article. In it he uses a voltage
doubler rectifier tube and a beam pentode, both of which use 25v
filaments. So I ordered up the tubes, and they arrived recently for me
and my radio-building friend Brien, VE3VAW.

Now the thing is, we need to drop the excess 60v at .3A on these filaments. A resistor will do the trick, of course, but it will put out about 20w: that's hot and pretty useless. The article uses 'line cord': what the heck is that, resistive wire or something? and is it totally out of code now? How about a light bulb? Anyone suggest a 24v or 48v bulb that is right on the money? There's always a xformer but I think we're both trying for the 1930s portable look (i.e. AC/DC).

For that matter, how closely does one have to follow the voltages on filaments anyway? I imagine the tube burns out faster if you push it, but how much faster?

Again trying to borrow a life's experience with these devices,

73, VE3UWL

Bruce G. Robertson Dept. of Classics, U. of T.

Date: Fri, 12 Jan 1996 00:03:37 -0500 (EST)
From: Bruce Robertson <brucerob@epas.utoronto.ca>
To: glowbugs <glowbugs@theporch.com>
Subject: crystal detector substitute
Message-ID: <Pine.SGI.3.91.960111235847.5322B-100000@epas.utoronto.ca>

In my package from AES I got the crystal for a crystal radio which I'd like to build my dad as a retirement gift. The thing is, they were all out of the detector assemblies. I've never worked with one of these do it yourself diodes; does anyone have a good idea as to what I should rig up as a substitute cat's wisker? Should the tickler be copper or steel, stiff or soft? Also the crystal seems to be potted in some conductive cement; any idea how I should wire this into the circuit?

73, VE3UWL

Bruce G. Robertson Dept. of Classics, U. of T.

Date: Thu, 11 Jan 1996 22:07:26 -0800
From: mjsilva@ix.netcom.com (michael silva)
To: glowbugs@theporch.com
Subject: Re: Voltage dropping for filament
Message-ID: <199601120607.WAA16155@ix6.ix.netcom.com>

Bruce G. Robertson wrote:

>Now the thing is, we need to drop the excess 60v at .3A on these
>filaments...
> The article uses 'line cord': what the heck is that, resistive wire
>or something? and is it totally out of code now?

Yep, the line cord had a third, resistance lead for dropping the excess filament voltage. Doubt very much you can buy them new (except maybe from Antique Electronic Supply?). They became obsolete when tube lineups that dropped the entire 110v across the heater string came into being (late 1930s?). You could use a ballast tube to drop the voltage (assuming you can find one with the right rating). It's just a resistor that plugs into a tube socket -- their advantage was mainly to get the heat on top of the chassis rather than underneath it.

I don't know about any 'gotchas' with this, but how about dropping most of the voltage by running the filament line in series with a (hidden) silicon diode. That should give you 60 volts equiv., and you can drop the last ten with a much smaller resistor (or you could add a 12v .3A oscillator tube and have a MOPA rig).

73,
Mike, KK6GM

Date: Fri, 12 Jan 96 00:35:37 CST
From: bill@texan.frco.com (William Hawkins)
To: glowbugs@theporch.com, mjsilva@ix.netcom.com
Subject: Re: Voltage dropping for filament
Message-ID: <9601120635.AA08938@texan.frco.com>

Went to an antique radio club meeting last year that had resistance line cords as one of its subjects. They were called "curtain burners". They no longer meet any codes, so they aren't made. The usual way to replace them is with a diode (since there's no DC mains left anywhere, right?) and enough resistance to make up the difference.

Bruce asked about running the tubes on high voltage anyway, with reduced life. The problem is that life is an exponential function of voltage. Wish I could find the numbers, but you don't have to drop volts very far (15-20% ?) to get 10 times the life. When you go towards the melting point, things probably go even faster.

Bill Hawkins bill@bvc.frco.com 612 895-2085 Minneapolis, MN USA

Date: Fri, 12 Jan 1996 00:25:09 -0800
From: mjsilva@ix.netcom.com (michael silva)
To: glowbugs@theporch.com
Subject: Newest Lindsay catalog goodies
Message-ID: <199601120825.AAA28103@ix7.ix.netcom.com>

Hi all,

Just got my second Lindsay catalog, and it looks like old radio books are a booming market. This one has a new book on regens, a book with reprinted chapters of the 1929 and 1934 ARRL Handbook, a 1922 parts catalog from Sears, etc, etc. I've gotten a few of their books, my favorite so far being the "Official 1934 Shortwave Radio Manual". There are also lots of non-radio books offered, such as one on distilling moonshine, and lots of Tesla stuff. Time to send off another order...

Nope, I didn't forget (well, almost):

Lindsay Publications, 815-935-5353.

73,
Mike, KK6GM

Date: Fri, 12 Jan 1996 10:41:29 +0100 (MET)
From: Duncan Cadd <dcadd@luc.ac.be>
To: glowbugs@theporch.com
Cc: dcadd@luc.ac.be
Subject: crystal detector substitute
Message-ID: <9601120941.AA29255@alpha.luc.ac.be>

Greetings, Bruce, from an overcast but dry Diepenbeek in N.E. Belgium!

> does anyone have a good idea as to what I should rig up
> as a substitute cat's wisker? Should the tickler be copper or steel,
> stiff or soft?

All manner of things were used for this depending on what one had to hand, ergo, use what you have to hand! For preference, it should be springy so a

small amount of pressure can be applied. Phosphor bronze is excellent for this. A phosphor bronze cleaning brush for small calibre firearms will yield a lifetime's supply of suitable wires! But almost anything will do.

> Also the crystal seems to be potted in some conductive
> cement; any idea how I should wire this into the circuit?

I'd advise against trying to solder it. High temperatures will destroy the rectifying action of the crystal, so solder the appropriate wire to a piece of e.g. flat copper strip and bind that to the holder with for example a hose clamp.

73,

Duncan ON9CHU / G0UTY   G-QRP 8117

End of GLOWBUGS Digest 74
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